

AMENDMENT TO THE CLAIMS:

1-30. (Cancelled)

31. (Original) A method for controlling an inserting apparatus over a range of master cycle speeds, the method comprising the steps of:

- (a) monitoring a master cycle speed at which an inserting apparatus operates over a plurality of master cycles;
- (b) determining when a new master cycle has begun;
- (c) at least once during every master cycle of operation of the inserting apparatus, performing a first calculation to determine a first cyclical position of the new master cycle at which an actuated device should begin to be activated, wherein the calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become fully active, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully active; and
- (d) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to begin to be activated when the new master cycle reaches or exceeds the calculated first cyclical position.

32. (Original) The method according to claim 31 comprising the steps of:

- (a) at least once during every master cycle of operation of the inserting apparatus, performing a second calculation to determine a second cyclical position of the new master cycle at which an actuated device should begin to be deactivated, wherein the calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become inactive, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully inactive; and
 - (b) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to become inactive when the new master cycle reaches or exceeds the calculated second cyclical position.
33. (Original) The method according to claim 31 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope opening device.
34. (Original) The method according to claim 31 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope registration device.
35. (Original) The method according to claim 31 wherein the step of causing the actuated device to begin to be activated includes energizing a mail piece take-away device.
36. (Original) A computer program product comprising computer-executable instructions embodied in a computer-readable medium, the computer program product adapted to

perform the steps of:

- (a) monitoring a master cycle speed at which an inserting apparatus operates over a plurality of master cycles;
- (b) determining when a new master cycle has begun;
- (c) at least once during every master cycle of operation of the inserting apparatus, performing a first calculation to determine a first cyclical position of the new master cycle at which an actuated device should begin to be activated, wherein the calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become fully active, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully active; and
- (d) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to begin to be activated when the new master cycle reaches or exceeds the calculated first cyclical position.

37. (Currently Amended) The computer program product method according to claim 36, ~~further comprising~~ wherein the steps of further comprise:

- (a) at least once during every master cycle of operation of the inserting apparatus, performing a second calculation to determine a second cyclical position of the new master cycle at which an actuated device should begin to be deactivated, wherein the calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to

become inactive, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully inactive; and

- (b) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to become inactive when the new master cycle reaches or exceeds the calculated second cyclical position.

38. (Currently Amended) The computer program product ~~method~~ according to claim 37 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope opening device.

39. (Currently Amended) The computer program product ~~method~~ according to claim 36 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope registration device.

40. (Currently Amended) The computer program product ~~method~~ according to claim 36 wherein the step of causing the actuated device to begin to be activated includes energizing a mail piece take-away device.

41. (Original) A method for continuously inserting inserts into corresponding envelopes in a controlled manner over a range of master cycle speeds at which an inserting apparatus operates, the method comprising:

- (a) monitoring a master cycle speed at which an inserting apparatus operates over a

- plurality of master cycles;
- (b) determining when a new master cycle has begun;
 - (c) at least once during every master cycle of operation of the inserting apparatus, performing a first calculation to determine a first cyclical position of the new master cycle at which an actuated device should begin to be activated, wherein the calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become fully active, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully active;
 - (d) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to begin to be activated when the new master cycle reaches or exceeds the calculated first cyclical position, wherein activation of the actuated device assists in an inserting process performed by the inserting apparatus;
 - (e) feeding an insert along a feed path at an insert feed rate in timed relation with the activation of the actuated device;
 - (f) feeding an envelope along the feed path at an envelope feed rate in timed relation with the activation of the actuated device, wherein the insert feed rate is greater than the envelope feed rate; and
 - (g) causing the insert to be inserted into the envelope in timed relation with the activation of the actuated device.

42. (Original) The method according to claim 41 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope opening device.
43. (Original) The method according to claim 41 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope registration device.
44. (Original) The method according to claim 41 wherein the step of causing the actuated device to begin to be activated includes energizing a mail piece take-away device.
45. (New) A method for controlling an inserting apparatus over a range of master cycle speeds, the method comprising the steps of:
- (a) monitoring a master cycle speed at which an inserting apparatus operates over a plurality of master cycles;
 - (b) determining when a new master cycle has begun;
 - (c) during every master cycle of operation of the inserting apparatus, performing a first calculation to determine a first cyclical position of the new master cycle at which an actuated device should begin to be activated; and
 - (d) at least once during every master cycle of operation, causing the actuated device to begin to be activated when the new master cycle reaches or exceeds the calculated first cyclical position.
46. (New) The method according to claim 45, wherein the calculation is based on the master

cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become fully active, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully active.

47. (New) The method according to claim 45 comprising the steps of:
 - (a) at least once during every master cycle of operation of the inserting apparatus, performing a second calculation to determine a second cyclical position of the new master cycle at which an actuated device should begin to be deactivated; and
 - (b) at least once during every master cycle of operation of the inserting apparatus, causing the actuated device to become inactive when the new master cycle reaches or exceeds the calculated second cyclical position.
48. (New) The method according to claim 47, wherein the second calculation is based on the master cycle speed measured for the new master cycle, a predetermined time duration required for the actuated device to become inactive, and a predetermined cyclical position of the new master cycle at which the actuated device should be fully inactive.
49. (New) The method according to claim 45 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope opening device.
50. (New) The method according to claim 45 wherein the step of causing the actuated device to begin to be activated includes energizing an envelope registration device.

51. (New) The method according to claim 45 wherein the step of causing the actuated device to begin to be activated includes energizing a mail piece take-away device.